



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Handwritten mark

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

08/918,194 08/21/97 NATHASINGH

D 30-4358(4710)

┌

MM91/0425

└

EXAMINER

ERNEST D BUFF
ALLIED SIGNAL INC
PO BOX 2245
101 COLUMBIA ROAD
MORRISTOWN NJ 07962

NGUYEN, T

ART UNIT

PAPER NUMBER

2832

DATE MAILED:

04/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/918,194

Applicant(s)
Nathasingh et al.

Examiner
Tuyen T. Nguyen

Group Art Unit
2832



☒ Responsive to communication(s) filed on Feb 10, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-9 and 14-26 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-9 and 14-26 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2832

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 7, 8, and 14-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, applicant states that "said strips each having ends that are formed *to be assembled* in an interlocking joint." Applicant has not claimed a final product. Claims 7, 8, and 14-25 inherit the defect of the parent claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen [US 3,538,474] in view of Klappert et al. [US 5,063,654].

Art Unit: 2832

Regarding claim 1, Olsen discloses a transformer core comprising a plurality of segments of metal strips *forming an interlocking joint*, each segment comprising at least one packet of said strips having edges. [see figure 4]

Regarding claim 2, Olsen discloses a core segment comprising a plurality of packets of cut metal strip having an overlap and underlap joint. [see figure 4]

Regarding claims 3-5, Olsen discloses each packet comprises a plurality groups of cut amorphous metal strips arranged in a step-lap joint [see figures 4-6] and having a C segment construction.

Regarding claim 7, Olsen discloses the edges of each of said segments are coated with a bonding material that protects said edges and provides said segment with increased mechanical strength.

Regarding claim 8, Olsen discloses the segments form a core having a joint region and said coating applied to surface area of the core.

Regarding claim 9, Olsen discloses each of said packets has a plurality of joint ends support separately for assembly into a finished transformer core.

Regarding claim 14, Olsen discloses a transformer core comprising two C segments.

Regarding claim 19, Olsen discloses the core has a joint region and a binding material is applied to said joint region to maintain contact between segments therein.

Olsen discloses the instant claimed invention except for the metal strips being formed of an amorphous metal.

Art Unit: 2832

Klappert et al. discloses packets of amorphous metal strips for transformer-core manufacture.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use amorphous metal for the strips of Olsen, as taught by Klappert et al., for the purpose of providing a homogeneous material for the strips of the transformer-core.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of Klappert et al. as applied to claim 2 above, and further in view of Lee et al. [US 5,134,771].

Olsen as modified discloses the instant claimed invention except for the segment have been annealed and edge coating with bonding material. Lee et al teaches utilizing annealing and edge coating with bonding material to the segment for the purpose of strengthening the core segment. It would have been obvious to one having ordinary skill in the art at the time the invention was made to anneal and edge coat with bonding material to the core segment of Olsen as modified, as taught by Lee et al., for the purpose of strengthening the core segment.

6. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of Klappert et al.

Regarding claims 15-18, Olsen as modified discloses the instant claimed invention except for number of C, I, and straight segments. It would have been an obvious matter of design choice to modify the transformer core of Olsen as modified into form of shell-type or three leg core for three phase transformer by forming different C, I, and straight segments together.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of Klappert et al. as applied to claim 1 above and further in view of Granfield [US 2,465,798].

Art Unit: 2832

Olsen as modified discloses the instant claimed invention except for the strips have varying widths arranged to provide a cruciform shape cross section. Grandfield teaches utilizing strips have varying widths arranged to provide a cruciform shape cross section. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the strips have varying widths arranged to provide a cruciform shape cross section, as taught by Grandfield, in Olsen's unit as modified for the purpose of providing the advantage of assembling the round coil and maximizing the coil space fill factor.

8. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of Klappert et al..

Olsen as modified discloses the instant claimed invention except for the core is not housed in an oil filled or dry-type transformer, a distribution transformer, a power transformer, and used in a voltage conversion apparatus. It would have been an obvious matter of design choice to house the core of Olsen as modified in an oil filled or dry-type transformer, a distribution transformer, a power transformer, and used in a voltage conversion apparatus, since applicant has not disclosed that housing the core in an oil filled or dry-type transformer, a distribution transformer, a power transformer, and used in a voltage conversion apparatus solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the core of Olsen being use as an electric induction apparatus.

Art Unit: 2832

9. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of Klappert et al. as applied to claims 1 and 2 above and further in view of Ames et al. [US 4,450,206].

Olsen as modified discloses the instant claimed invention except for the strips having a composition defined by the formula $M_{70-80}Y_{5-20}Z_{0-20}$. Ames et al. teaches utilizing the amorphous metal strip having a composition defined by the formula MYZ where the atom percent is in the range of the claimed invention (see TABLE I). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the amorphous metal strip of Ames into Olsen's unit as modified so the core segments can be suitable for use in voltage conversion and energy storage applications

Response to Arguments

10. Applicant's arguments with respect to claims 1-9 and 14-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Gellner, can be reached at (703)308-1721. The fax number for this Group is (703)305-1341.

Application/Control Number: 08/918,194

Page 7

Art Unit: 2832

Any inquiry of a general nature or relating to the status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.

TTN
Tuyen T. Nguyen

Art Unit 2832

April 23, 2000


LINCOLN DONOVAN
PRIMA EXAMINER
GROUP 2100